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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,439	01/31/2006	Eckhard Wolfgang	1454.1671	3860

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EXAMINER

KALAM, ABUL

ART UNIT	PAPER NUMBER
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2814

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/566,439

Applicant(s)

WOLFGANG ET AL.

Examiner

Abul Kalam

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/31/06 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/31/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 54, 61, 72 . Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 23 is objected to because of the following informalities:

In lines 1-2 of claim 23, the limitation "a complete layer of electrically insulating material" has antecedent basis issues, because "a layer of electrically insulating material" is already claimed in line 4 of claim 22, which claim 23 depends from. Thus, the limitation in claim 23 should be amended to recite -- the layer of electrically insulating material --, to provide consistency to the previously claimed limitation.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 11-15, 18 and 21-23** are rejected under 35 U.S.C. 102(b) as being anticipated by **Chu et al. (US 6,365,498, as cited by applicant, hereinafter, Chu)**.

With respect to **claim 11**, **Chu** teaches a circuit device provided on a substrate **(22, Figs. 2A-2F and 3)** and comprising:

a semiconductor component **(IC device 20; col. 2: Ins. 61-65)** arranged on the substrate **(22)** and having an electrical contact surface **(top surface 34 of bond pad 24; col. 5: Ins. 45-60)**; and

at least one connection line **(30, 40; col. 5: Ins. 55-57; col. 6: Ins. 5-15)** on the substrate to contact with the contact surface **(34)** of the semiconductor component,

wherein the electrical connection line **(30, 40)** is part of at least one discrete passive electrical component **(36, 38, 48; col. 5: Ins. 63-67; col. 6: Ins. 5-21)** arranged on the substrate **(22)**.

With respect to **claim 12**, which is dependent on claim 11, **Chu** teaches wherein the discrete passive electrical component is a capacitor **(48, Fig. 3; col. 6: Ins. 5-21)** and the electrical connection line **(40)** is an electrode of the capacitor **(48)**.

With respect to **claim 13**, which is dependent on claim 11, **Chu** teaches wherein the discrete passive electrical component is a coil (**36, Fig. 2E**), and the electrical connection line (**30; col. 5: Ins. 57-67**) is a winding of the coil (**col. 4: Ins. 45-48**):

With respect to **claim 14**, which is dependent on claim 11, **Chu** teaches wherein the discrete passive electrical component is an electrical resistor (**36, 38, Figs. 2C and 2D**), and the electrical connection line (**30**) is a wire resistor (**col. 5: Ins. 57-67**).

With respect to **claim 15**, which is dependent on claim 11, **Chu** teaches wherein the discrete passive electrical component is a part of a sensor of a physical variable (**the electrical wire resistors 36 and 38, formed from connection line 30 can act as temperature sensors**).

With respect to **claim 18**, which is dependent on claim 14, **Chu** teaches wherein the discrete passive electrical component is a part of a sensor of a physical variable (**the electrical wire resistors 36 and 38, formed from connection line 30, can act as temperature sensors**).

With respect to **claim 21**, **Chu** teaches wherein a method for producing a circuit device (**Figs. 2A-2F and 3**), comprising:

producing a semiconductor component (**IC device 20; col. 2: Ins. 61-65**) on a substrate (**22**),

the semiconductor component (**20**) having an electrical contact surface (**top surface 34 of bonding pad 24; Fig. 2A**) facing away from the substrate (**22**); and

producing an electrical connection line (30, 40) that contacts the contact surface (34) of the semiconductor component, the electrical connection line (30, 40) being part of a discrete passive electrical component (36, 38, 48; col. 5: Ins. 63-67; col. 6: Ins. 5-21).

With respect to **claim 22**, which is dependent on claim 21, **Chu** teaches wherein the electrical connection line (30, 40; Fig. 2A and 3) contacts the contact surface (34) at an electrical contact (24), the electrical contact faces away from the substrate (22), and a layer of electrically insulating material (28) is provided on the semiconductor component (20) and the substrate (22) in such a way that the electrical contact (24) is exposed (col. 5: Ins. 50-55).

With respect to **claim 23**, (as best interpreted by the Office), which is dependent on claim 22, **Chu** teaches wherein the layer of electrically insulating material (28) is first applied, and then the electrical contact (34) is exposed by opening a window in the electrically insulating material (col. 5: Ins. 50-55).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 16, 17, 19 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chu ('498, cited above)**, as applied above to claims 11 and 14, respectively, and further in view of **Iseki et al. (US 2002/0036345)**.

With respect to **claims 16,17, 19 and 20 Chu** discloses all the limitations of the claim, as set forth above in claims 11 and 14, respectively, with the exception of disclosing: wherein the semiconductor component is a power semiconductor component, selected from the group consisting of MOSFETs, IGBTs, and bipolar transistors.

However, **Iseki** teaches that an integrated circuit device may comprise of bipolar transistors, IGBTs or power MOSFETs (**pg. 10: [0108]**), which are used for high frequency or high power applications.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to form the IC device of **Chu** with power semiconductor components such as IGBTs and MOSFETs, as taught by **Iseki**, because such power transistors provide high frequency and high power applications.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abul Kalam whose telephone number is 571-272-8346. The examiner can normally be reached on Monday - Friday, 9 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Abul Kalam



Nathan W. Ha, PE